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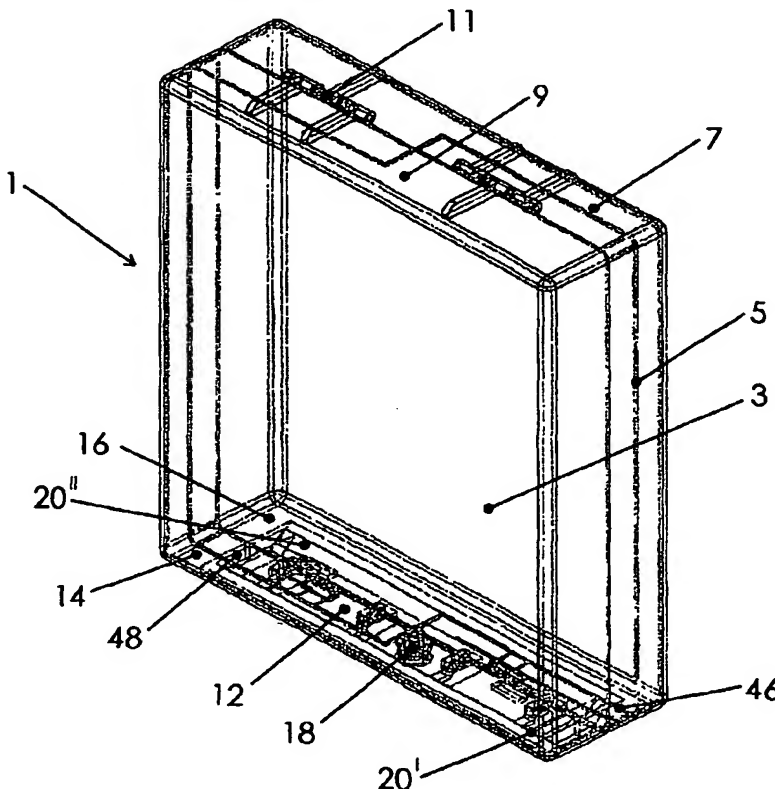
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(54) Title: ANTI-THEFT CASE FOR MISCELLANEOUS ITEMS, PARTICULARLY FOR VIDEOCASSETTES, DVD, COMPACT DISKS, MUSICASSETTES AND THE LIKE



(57) **Abstract:** An anti-theft case (1) is disclosed, particularly for videocassettes, DVD, compact disks, musicassettes and the like, comprising : a first and a second mutually hinged half-cases (3, 5); opening and closing means (12) and locking and unlocking means (18) of the case. In order to optimise assembling and costs of the case (1), the two half-cases (3, 5) are of a same shape and size ; the opening and closing means (12) are shaped as an elongated slider and are inserted into a seat (20', 20'') obtained in the half-cases (3, 5); and the locking and unlocking means (18) are composed of a cylindrical pin adapted to go in and out of a seat (22) obtained in the opening and closing means (12).

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ANTI-THEFT CASE FOR MISCELLANEOUS ITEMS, PARTICULARLY FOR
VIDEOCASSETTES, DVD, COMPACT DISKS, MUSICASSETTES AND THE
LIKE

The present invention refers to an anti-theft case for miscellaneous items, particularly for videocassettes, DVD, compact disks, musicassettes and the like, but also for software, printer cartridges, perfumes and similar items.

Anti-theft cases of the above-mentioned type are known in the art. They have different configurations and shapes adapted for the object that they must contain, preventing its theft from the places where the objects are exhibited, through transmitter means contained in the cases themselves and that are adapted to trigger suitable receiver means placed near the exits of the exhibition places.

In particular, one of the known configurations provides for a box-shaped case made of two parts that are mutually-hinged on one side and locked when opening and closing by various types of opening and closing means and locking and unlocking means, usually placed on the opposite side with respect to the one where the hinges are located.

These cases however are not satisfactory and have some

problems: first of all, the two case parts are of a mutually different shape and therefore require realising two different dies, with high cost increases; moreover, they are scarcely flexible, requiring particular designs, always mutually different, according to the objects that they will have to contain; finally, the opening and closing means and the locking and unlocking means are of a mechanical or magnetic type, and are complex and costly to make, being equipped with a relatively high number of component parts.

Object of the present invention is solving the above prior-art problems, by providing an anti-theft case that is simple to make, being composed of two mutually identical parts, that can be assembled easily and with a reduced cost.

A further object of the present invention is providing a case of the above mentioned type that is equipped with opening and closing means in a single piece and equipped with locking and unlocking means that are simple and in a reduced number, further contributing to decrease the case cost, without impairing its final efficiency.

The above and other objects and advantages of the invention, as will appear from the following description, are obtained by an anti-theft case as claimed in Claim 1. Preferred embodiments and non-trivial variations of the

present invention are claimed in the dependent Claims.

The present invention will be better described by some preferred embodiments thereof, given as a non-limiting example, with reference to the enclosed drawings, in which:

- Figure 1 is a a perspective view of an embodiment of the anti-theft case according to the present invention;

- Figure 2 is an exploded perspective view of the case of Fig. 1, that shows its main component parts;

- Figure 3 is another exploded perspective view similar to Fig. 2 and made from another angle;

- Figure 4 is a detailed perspective view of the opening and closing means; and

- Figures 5 to 8 are views that show four opening/closing steps of the case of the present invention.

With reference to the Figures, a preferred embodiment of the anti-theft case of the present invention is shown and described. It will be readily obvious that numerous variations and modifications (for example related to shape, sizes, various colours and parts with equivalent functionalities) can be made to the described case without departing from the scope of the invention as appears in the enclosed Claims.

The Figures shows a preferred embodiment of the anti-theft case 1 of the present invention, particularly adapted for containing videocassettes, DVD, compact disks,

musicassettes and the like. Such anti-theft case 1 comprises:

- a first half-case 3;
- a second half-case 5 hinged on one side 7 to a corresponding side 9 of the first half-case 3 through common hinge means 11;
- opening and closing means 12 placed in order to engage one side 14 of the first half-case 3 opposite to the side 9 and one side 16 of the second half-case 5 opposite to the side 7 in order to allow opening and closing the anti-theft case 1; and
- locking and unlocking means 18 adapted to lock and unlock the opening and closing means 12 in their operating positions.

The anti-theft case 1 of the present invention, in order to obtain the above-mentioned objects, first of all provides for the fact that the first half-case 3 and the second half-case 5 are of the same shape and size: this allows using a single die for manufacturing the case 1 and readily adapting such case 1 to any type of product that it will have to contain.

Moreover, as a further improving feature of the case 1 of the invention, the opening and closing means 12 are shaped as an elongated slider (preferably with a trapezoidal transverse section) and are inserted into a

seat 20', 20'' obtained in the first and second half-cases 3, 5.

Still more, the locking and unlocking means 18 are composed of a cylindrical pin adapted to go in and out of a seat 22 obtained in the opening and closing means 12, and they can be equipped with holding hooks 45 to further improve the case 1 closure.

A compact anti-theft case 1 is thereby realised, composed of a very small number of component parts, with a reduced cost and that can be easily manufactured and assembled, and that is at the same time compact and sturdy, for the end use provided therefor.

As operating variation, the case 1 of the invention can further be equipped with resilient means 24 (commonly an elongated plane lamellar spring or an helical spring) operatively connected to one of the first or second half-cases 3, 5 and to the opening and closing means 12: such resilient means 24 are adapted to push the opening and closing means 12 in an opening position when they are unlocked by the locking and unlocking means 18.

In order to improve the operating closing seal, the anti-theft case 1 of the invention can provide for the fact that the first and second half-cases 3, 5 are equipped, on the side where the opening and closing means 12 operate, with at least one groove 30, 32 adapted to engage a

corresponding pin 34, 36 of the opposite half-case.

Moreover, the opening and closing means 12 are equipped with a plurality of recesses 40 adapted to engage corresponding projections 44 of the first and second half-cases 3, 5 in order to realise a closing of the anti-theft case 1.

Finally, the seat 22 of the opening and closing means 12 is equipped with walls 46 for enabling a sliding of the locking and unlocking means 18 and with at least one holding shoulder 48 for unmovably holding the locking and unlocking means 18 in a closing position.

The operation of the anti-theft case 1 according to the present invention will now be described, with reference to Fig. 5 to 8.

With the open case 1 (Fig. 8), in order to close it, the object to be protected is placed into the case 1 and the two half-cases 3, 5 are closed one over the other (Fig. 6 and 7) making the opening and closing means 12 slide till the locking and unlocking means 18 have slid into the seat 22 abutting onto the holding shoulder 48 in order to lock the case 1 in a closing position (Fig. 6).

In order to open the case 1, the locking and unlocking means 18 are attracted (through known magnetic means, commonly available in the sales counters of the places where the cases 1 are located) outside the seat 22, freeing

thereby the opening and closing means 12, that are made slide (manually or through the resilient means 24) into their disengagement position with the first and second half-cases 3, 5 in order to allow opening the case 1 for removing therefrom or inserting therein a product.

CLAIMS

1. Anti-theft case (1) for miscellaneous items, particularly for videocassettes, DVD, compact disks, musicassettes and the like, comprising:

- a first half-case (3);
- a second half-case (5) hinged on one side (7) to a corresponding side (9) of said first half-case (3) through hinge means (11);
- opening and closing means (12) placed in order to engage one side (14) of said first half-case (3) opposite to said side (9) and one side (16) of said second half-case (5) opposite to said side (7) in order to allow opening and closing said anti-theft case (1); and
- locking and unlocking means (18) adapted to lock and unlock said opening and closing means (12) in their operating positions;

characterised in that:

- said first half-case (3) and said second half-case (5) are of a same shape and size;
- said opening and closing means (12) are shaped as an elongated slider and are inserted into a seat (20', 20'') obtained in said first and second half-cases (3, 5); and
- said locking and unlocking means (18) are composed of

a cylindrical pin adapted to go in and out of a seat (22) obtained in said opening and closing means (12).

2. Anti-theft case (1) according to Claim 1, characterised in that it is further equipped with resilient means (24) operatively connected to one of said first or second half-cases (3, 5) and to said opening and closing means (12), said resilient means (24) being adapted to push said opening and closing means (12) in an opening position when they are unlocked by said locking and unlocking means (18).

3. Anti-theft case (1) according to Claim 2, characterised in that said resilient means (24) are composed of an elongated plane lamellar spring.

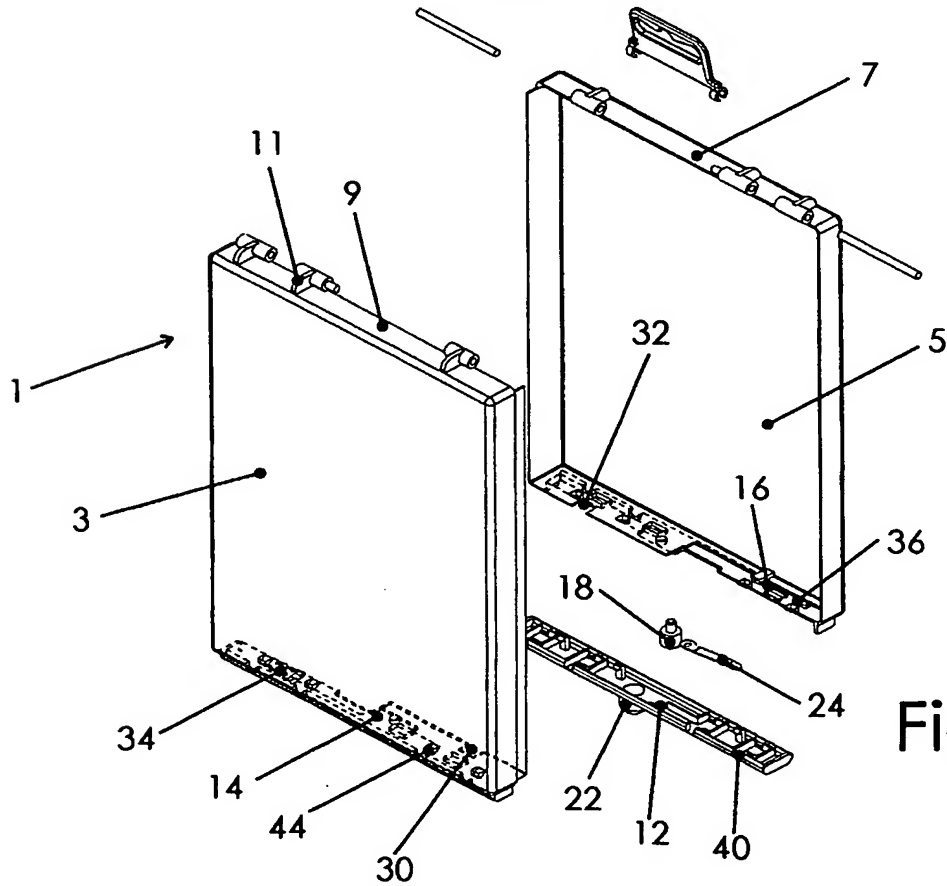
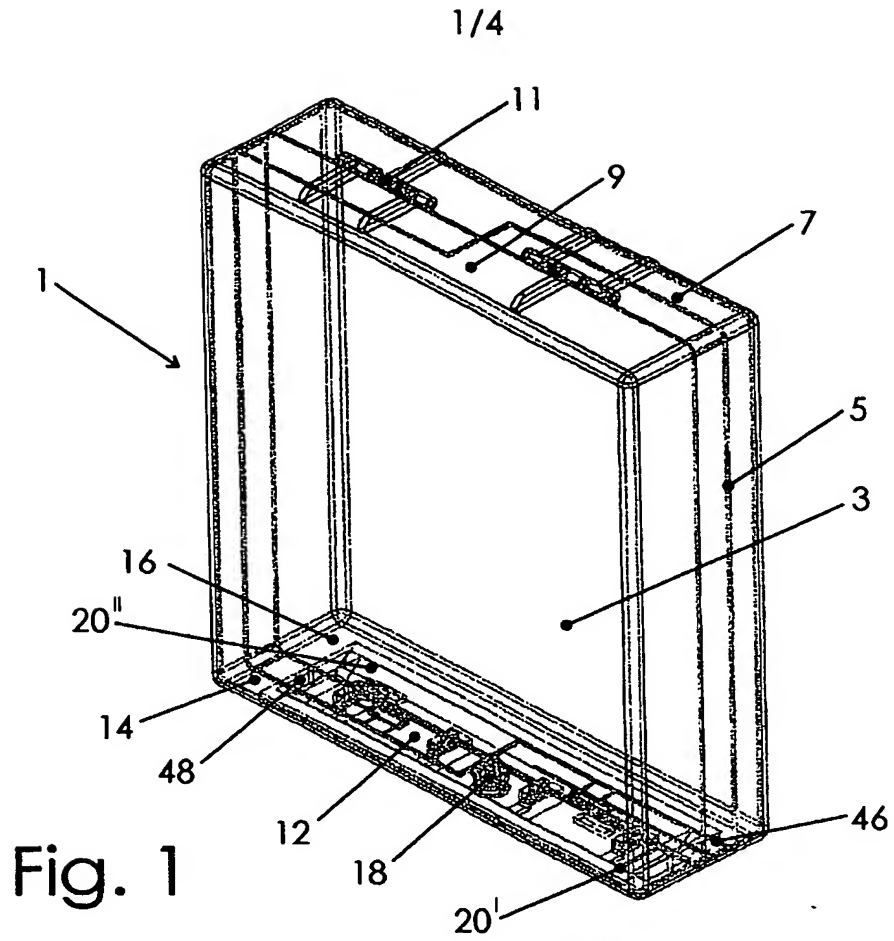
4. Anti-theft case (1) according to Claim 2, characterised in that said resilient means (24) are composed of an helical spring.

5. Anti-theft case (1) according to Claim 1, characterised in that said first and second half-cases (3, 5) are equipped, on the side where said opening and closing means (12) operate, with at least one groove (30, 32) adapted to engage a corresponding pin (34, 36) of the opposite half-case in order to guarantee a better closing seal of said anti-theft case (1).

6. Anti-theft case (1) according to Claim 1, characterised in that said opening and closing means (12) are equipped with a plurality of recesses (40) adapted to engage

corresponding projections (44) of said first and second half-cases (3, 5) in order to realise a closing of said anti-theft case (1), and with holding hooks (45).

7. Anti-theft case (1) according to Claim 1, characterised in that the seat (22) of said opening and closing means (12) is equipped with walls (46) for enabling a sliding of said locking and unlocking means (18) and with at least one holding shoulder (48) for unmovably holding said locking and unlocking means (18) in a closing position.



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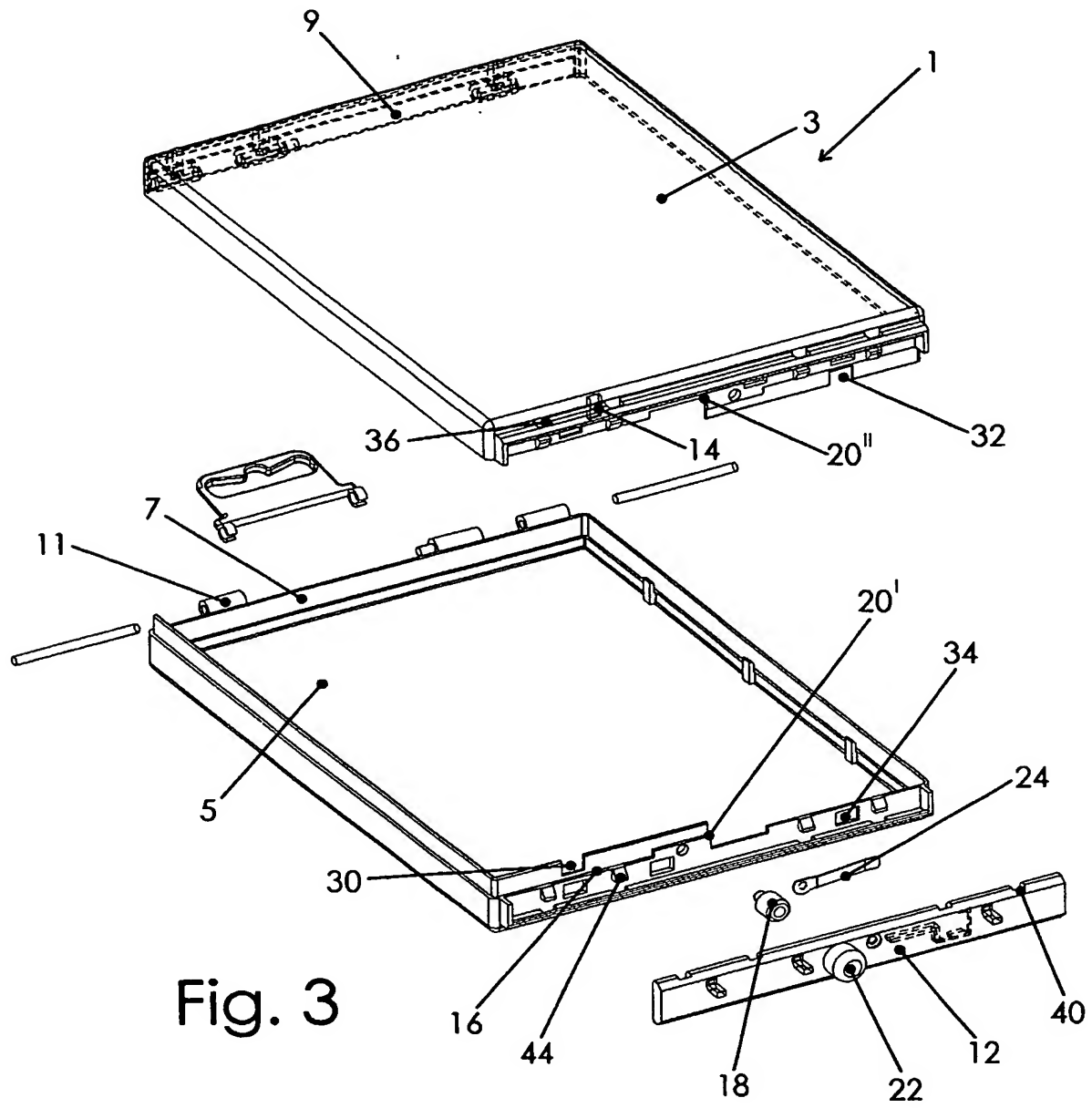


Fig. 3

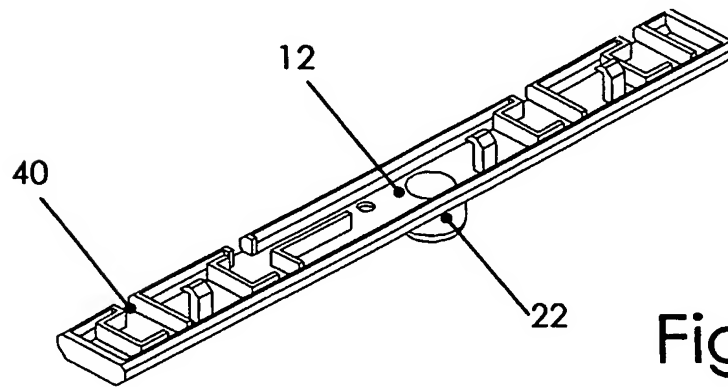


Fig. 4

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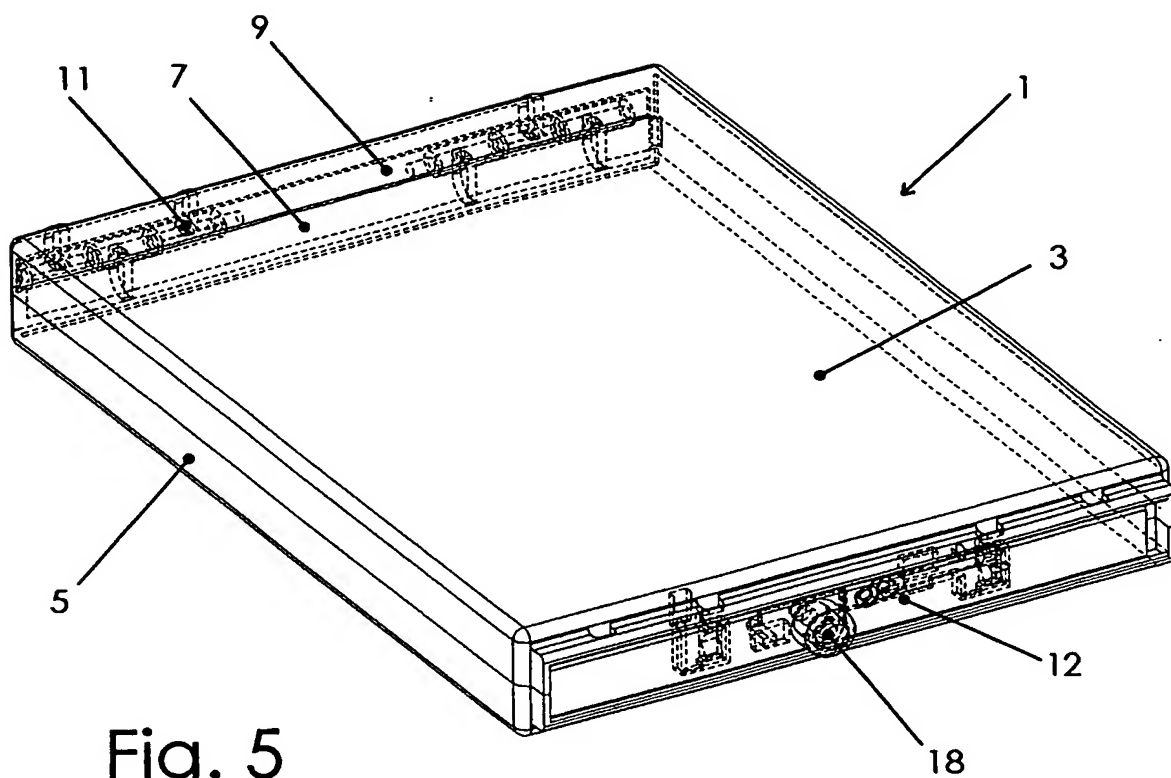


Fig. 5

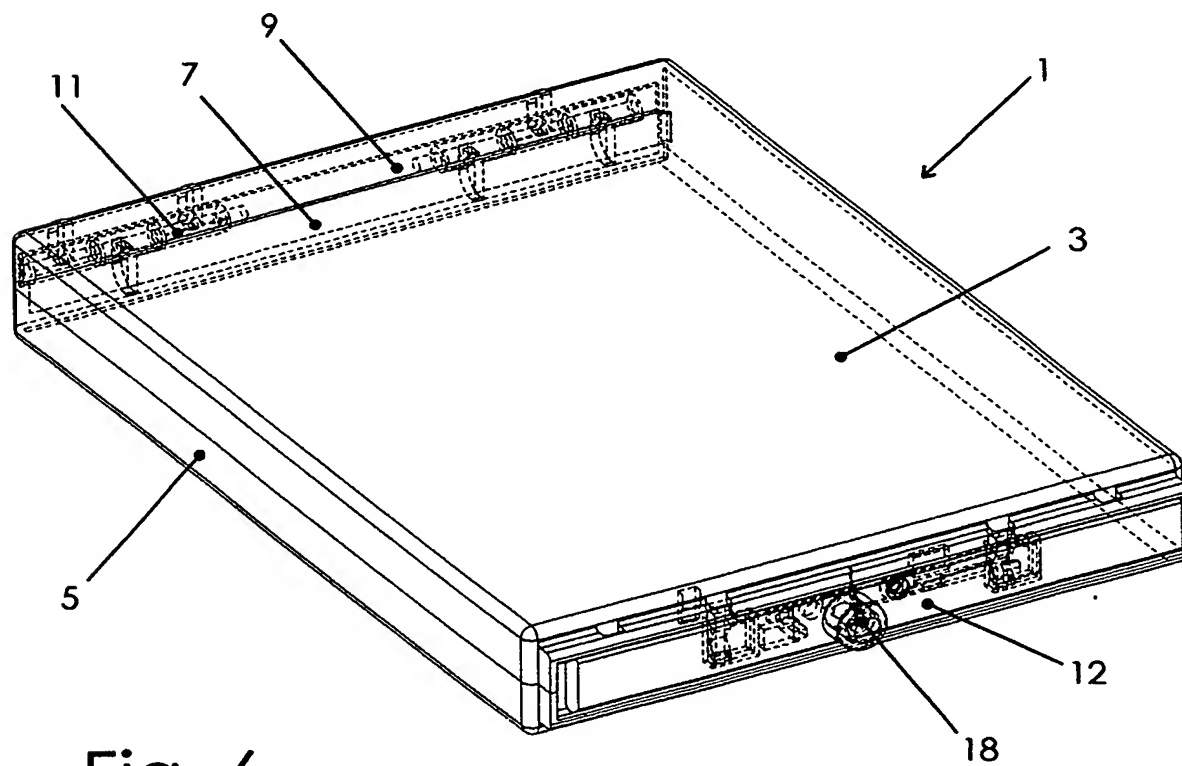


Fig. 6

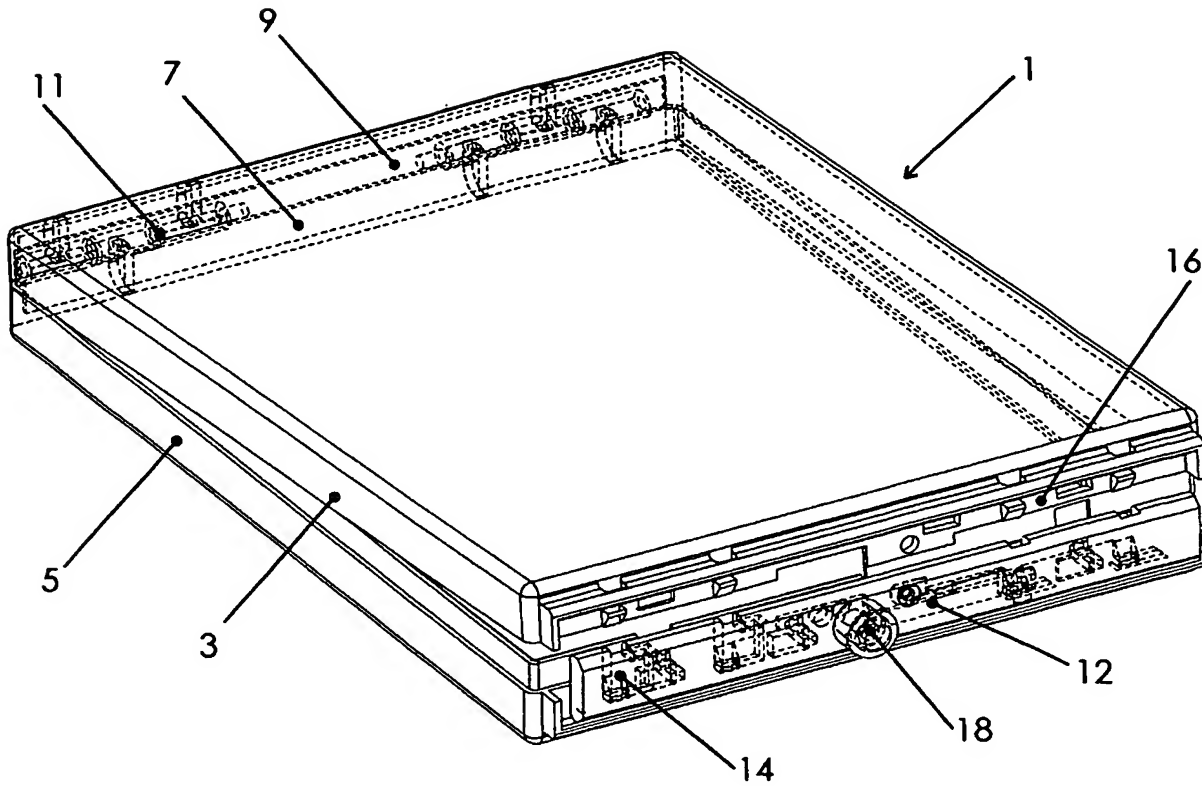


Fig. 7

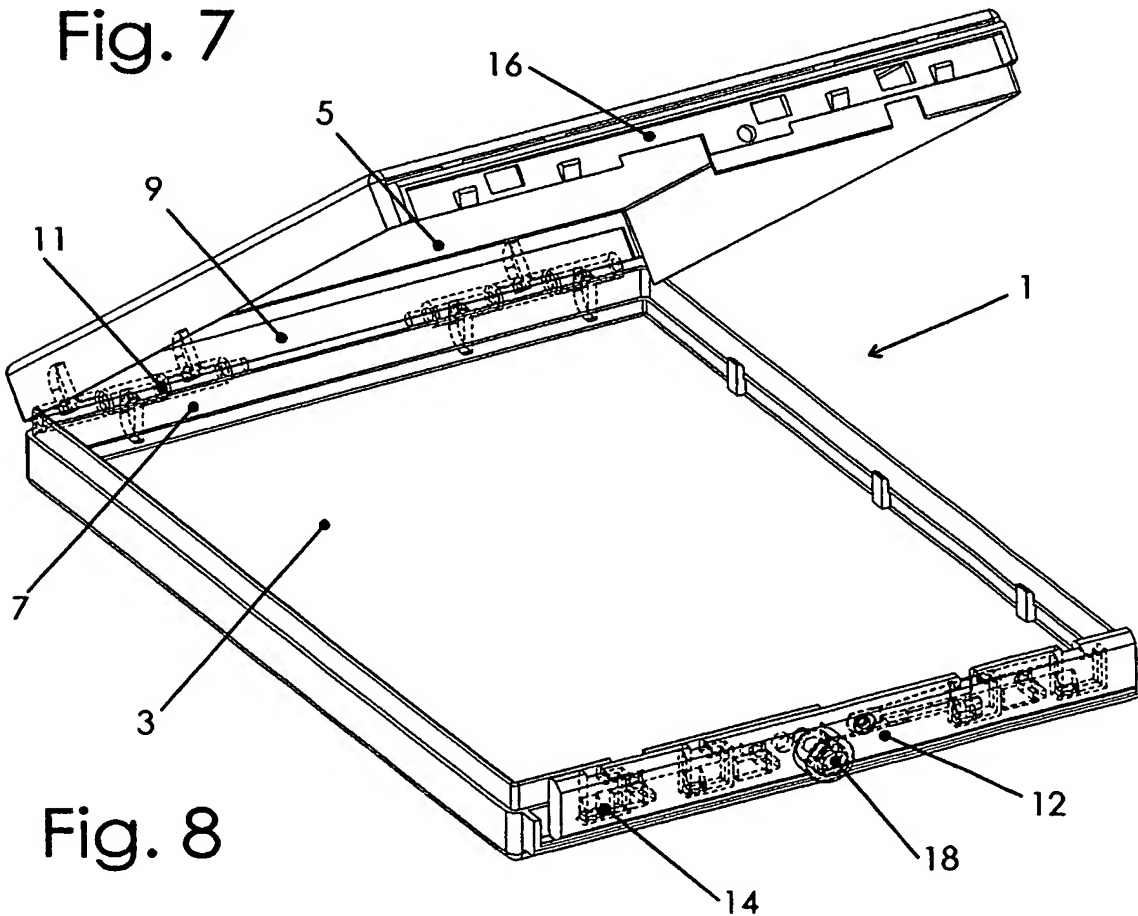


Fig. 8

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According to International Patent Classification (IPC) or to both national classification and IPC

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 453 743 A (SANDERS ET AL.) 12 June 1984 (1984-06-12) column 3, line 4 -column 4, line 21; figures ---	1-3,6,7
X	US 5 760 689 A (HOLMGREN) 2 June 1998 (1998-06-02) column 6, line 1 -column 6, line 47; figures 24-28 ---	1,6
A	---	7
X	US 5 598 728 A (LAX) 4 February 1997 (1997-02-04) column 4, line 1 -column 5, line 3; figures ---	1,2,4,6, 7

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A	US 3 994 416 A (MULLIGAN) 30 November 1976 (1976-11-30) column 2, line 22 -column 2, line 24; figures ----	1
A	FR 2 460 855 A (ETABLISSEMENTS A. BOURBON ET FILS) 30 January 1981 (1981-01-30) page 4, line 5 -page 4, line 7; figures -----	1

INTERNATIONAL SEARCH REPORT

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International Application No

PCT/12/00650

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4453743	A	12-06-1984	NONE	
US 5760689	A	02-06-1998	SE 506232 C2 AT 158053 T AU 678661 B2 AU 1207395 A BR 9408180 A CA 2175570 A1 DE 69405585 D1 DE 69405585 T2 EP 0731870 A1 ES 2108560 T3 JP 9506399 T SE 9303945 A WO 9514841 A1	24-11-1997 15-09-1997 05-06-1997 13-06-1995 27-05-1997 01-06-1995 16-10-1997 26-02-1998 18-09-1996 16-12-1997 24-06-1997 30-05-1995 01-06-1995
US 5598728	A	04-02-1997	US 5768922 A US 5850752 A	23-06-1998 22-12-1998
US 3994416	A	30-11-1976	NONE	
FR 2460855	A	30-01-1981	FR 2460855 A1	30-01-1981

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